



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901

FEB 07 2011

Scott Armentrout  
Forest Supervisor  
Sierra National Forest  
1600 Tollhouse Road  
Clovis, CA 93611

Subject: Draft Environmental Impact Statement for Kings River Experimental Watershed  
Forest Health and Research Project, Sierra National Forest, Fresno County, CA  
(CEQ# 20100477)

Dear Mr. Armentrout:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above-referenced project. Our review and comments are pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

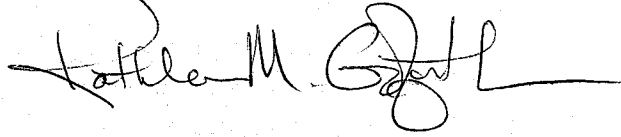
EPA acknowledges the importance of the project's goals to improve forest health, reduce fuel loading, and conduct research regarding the effects of vegetation treatments on watersheds and forest health. The preferred alternative (Alternative 5) fully meets research objectives, as described in the purpose and need, to fully investigate a treatment strategy that is intended to protect headwater resources in the southern Sierra Nevada. We recognize the ecological significance of the Sierra National Forest and support the inclusion of the resource protection measures and best management practices described in the DEIS. Overall, the DEIS contains valuable information useful to both the public and decision maker(s); however, we have some concerns that should be addressed in the Final Environmental Impact Statement (FEIS).

We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*"). EPA recommends the FEIS include supplementary analysis on air quality emissions and climate change. Our enclosed detailed comments provide additional information regarding the concerns identified above.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD to the address above (mail code: CED-2). Should you have any questions regarding our comments, please contact me at (415) 972-3521, or contact

Stephanie Skophammer, the lead reviewer for the project. Stephanie can be reached at (415) 972-3098 or [skophammer.stephanie@epa.gov](mailto:skophammer.stephanie@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kathleen M. Goforth". The signature is fluid and cursive, with a long horizontal line extending to the right.

Kathleen M. Goforth, Manager  
Environmental Review Office  
Communities and Ecosystems Division

cc: Judi Tapia, Environmental Coordinator, Sierra National Forest

Enclosures: Summary of EPA Rating Definitions  
Detailed Comments

# **SUMMARY OF EPA RATING DEFINITIONS\***

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

## **ENVIRONMENTAL IMPACT OF THE ACTION**

### ***"LO" (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

### ***"EC" (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

### ***"EO" (Environmental Objections)***

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

### ***"EU" (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

## **ADEQUACY OF THE IMPACT STATEMENT**

### ***"Category 1" (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

### ***"Category 2" (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

### ***"Category 3" (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.



**EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)  
FOR KINGS RIVER EXPERIMENTAL WATERSHED FOREST HEALTH AND RESEARCH PROJECT,  
FRESNO COUNTY, CALIFORNIA, FEBRUARY 7, 2011**

**Air Quality**

***Fully evaluate impacts to Class I airsheds.*** The DEIS does not sufficiently analyze the potential effects of prescribed burning and commercial treatments on air quality within Class I airsheds that are located within 100 kilometers of the project area. The DEIS lists 3 areas within 4-8 miles of the project that could potentially be affected, including Kings Canyon National Park, Dinkey Lakes Wilderness, and John Muir and Monarch Wilderness (p. 3.1-7).

**Recommendation:** The FEIS should discuss how emissions from the proposed project and alternatives would affect air quality, including visibility, within the impact area. Impacts to the listed Class 1 airsheds should be assessed as well as specific measures that would be included as part of the project to minimize those impacts to air quality in these areas.

***Describe health impacts from prescribed burns.*** There is growing concern that Environmental Justice (EJ) communities may be more vulnerable to pollution impacts than other communities. EJ communities may experience greater health impacts than would be predicted using traditional risk assessment. Consistent with NEPA and the goals of Executive Order 12898, if human health could be impacted by the proposed project, it would be beneficial to use a screening process to determine which aspects of human health could be impacted. Depending on the results of the screening, an analysis may need to be conducted in order to determine the direct, indirect, and cumulative impacts to human health. Such impacts could arise from smoke emissions from prescribed burning that affect the Fresno metropolitan area and the foothill communities, which are within the geographic scale of the project (p. 3.1-2).

**Recommendation:** We recommend that the FEIS include a discussion of the potential health effects resulting from the prescribed fire treatments and other vegetation management activities. A screening process should be conducted to determine which aspects of human health could be impacted. The Forest Service should partner with local, State, and federal health departments to conduct the appropriate analysis, and to determine appropriate and effective mitigation measures to address potential adverse health impacts, particularly from smoke.

**Climate Change**

***Describe climate change and its effects on successful reforestation.*** Current research indicates that climate change could impact the amount, timing, and intensity of rain and storm events; increase the length and severity of the fire season; modify the rate and distribution of harmful timber insects and diseases; and aggravate already stressed water supplies. A significant change in the weather patterns could have important implications for how we manage our forests. A number of studies specific to California have indicated the potential for significant environmental impacts as a result of changing temperatures and subsequent environmental

impacts.<sup>1</sup> The California Climate Action Team released a report<sup>2</sup> on the impacts of climate change to California, the latest research, and State efforts to adapt to impacts. The report indicates that estimates of the long-term risk of large wildfires in California are substantial, with increases in occurrences statewide ranging from 58% to 128% in 2085.

One objective of the project is to prevent the occurrence of large uncontrolled wildfires that result in high levels of GHG (p. 1-10). EPA recommends that the Forest Service consider the potential effects of climate change on Forest Service resources and describe how the Forest Service will adaptively manage affected resources. For example, the likelihood of larger and more frequent wildfires could increase erosion, sedimentation, and chemical and nutrient loads in surface waters, resulting in adverse impacts to water quality and quantity as well as species diversity. The DEIS states that climate trends for the Sierra National Forest indicate increasing temperatures with increasing precipitation, but indicates that no climate change or vegetation modeling has been carried out for the Sierra National Forest (p. 3-16).

**Recommendation:** We recommend the FEIS include a more detailed description of climate change and the implications for successful reforestation. For example, describe and evaluate projected climate change impacts on the frequency of high intensity storms, magnitude of rain events and severity and frequency of insect outbreaks, droughts, and fire seasons, and their effects on the success of reforestation efforts. We encourage the Forest Service to elaborate on aspects of the project's research related to climate change, including temperature and precipitation, and how they can be incorporated into the goals of successful fuel management and watershed restoration.

We recommend that the Final EIS estimate the quantities of greenhouse gas emissions resulting from mobile and non-mobile sources during project implementation. As appropriate, mitigation measures for direct sources of greenhouse gas emissions should be considered.

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<sup>1</sup>Our Changing Climate: Assessing the Risks to California, A Summary Report from the California Climate Change Center, July 2006.

<sup>2</sup> Draft 2009 Climate Action Team Biennial Report to the Governor and Legislature. See internet address: <http://www.climatechange.ca.gov/publications/cat/index.html>.